EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	11793	nanotube	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/06 07:44
L2	7269	azomethine	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/06 07:22
L3	51	l1 and l2	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/06 07:35
L4	14	l1 same l2	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/06 07:35
L5	644111	purif$	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/06 07:44
L6	837	l1 same l5	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/06 07:45
L7	10	l2 and l6	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/06 09:10
L8	2	l2 same l6	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/06 07:45
L9	262	585/839.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/06 10:49
L10	0	l1 and l9	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/06 09:10
L11	3168	("977").CLAS.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/03/06 09:10

EAST Search History

L13	540	l1 and l11	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/06 09:11
L14	2	l2 and l13	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/06 10:50
L15	46	977/750.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/06 10:48
L16	0	l2 and l15	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/06 09:13
L17	5	l2 and l11	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/06 10:48
L18	0	l9 and l11	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/06 10:49
L19	0	l2 and l9	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/06 10:50
L20	1	((nanotube and azomethine) and purif$).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/06 10:51

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NEWS 13	JAN 30	Saved answer limit increased
NEWS 14	JAN 31	Monthly current-awareness alert (SDI) frequency added to TULSA
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NEWS 18	FEB 22	Updates in EPFULL; IPC 8 enhancements added
NEWS 19	FEB 27	New STN AnaVist pricing effective March 1, 2006
NEWS 20	FEB 28	MEDLINE/LMEDLINE reload improves functionality
NEWS 21	FEB 28	TOXCENTER reloaded with enhancements
NEWS 22	FEB 28	REGISTRY/ZREGISTRY enhanced with more experimental spectral property data
NEWS 23	MAR 01	INSPEC reloaded and enhanced
NEWS 24	MAR 03	Updates in PATDPA; addition of IPC 8 data without attributes

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=> nanotube
```
         23843 NANOTUBE
         28520 NANOTUBES
L1       29439 NANOTUBE
                 (NANOTUBE OR NANOTUBES)
```

=> azomethine
```
          7136 AZOMETHINE
          1950 AZOMETHINES
L2        7954 AZOMETHINE
                 (AZOMETHINE OR AZOMETHINES)
```

=> l1(l)l2
```
L3          14 L1(L)L2
```

=> d l3 1-14 ti

L3 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
TI Non-covalent DNA complexes with functionalized carbon nanotubes and their use as cell delivery vectors

L3 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
TI Carbon-based materials: From fullerene nanostructures to functionalized carbon nanotubes

L3 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
TI Soluble carbon nanotube ensembles for light-induced electron transfer interactions

L3 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
TI Functionalization of carbon nanotubes via 1,3-dipolar cycloadditions

L3 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
TI Purification process of carbon nanotubes

L3 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
TI Organic functionalization of carbon nanotubes

L3 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
TI Applications of soluble carbon nanotubes

L3 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
TI Supramolecular organized structures of fullerene-based materials and organic functionalization of carbon nanotubes

L3 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
TI Fullerene-based morphologically organized superstructures and soluble functionalized carbon nanotubes materials

L3 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
TI A Theoretical Exploration of the 1,3-Dipolar Cycloadditions onto the Sidewalls of (n,n) Armchair Single-Wall Carbon Nanotubes

L3 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
TI Organic functionalized carbon nanotubes

L3 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
TI Purification of HiPCO carbon nanotubes via organic functionalization

L3 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
TI Organic Functionalization of Carbon Nanotubes

L3 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
TI Quantum chemistry study of chemical functionalization reactions of fullerenes and carbon nanotubes

=> d l3 6-14 ti fbib abs

L3 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
TI Organic functionalization of carbon nanotubes
AN 2003:947268 CAPLUS
DN 140:320806
TI Organic functionalization of carbon nanotubes
AU Tasis, Dimitrios; Tagmatarchis, Nikos; Georgakilas, Vasilios; Pantarotto, Davide; Vaccari, Lisa; Bianco, Alberto; Guldi, Dirk M.; Prato, Maurizio
CS Dipartimento di Scienze Farmaceutiche, Universita di Trieste, Trieste, Italy
SO AIP Conference Proceedings (2003), 685(Molecular Nanostructures), 282-286
CODEN: APCPCS; ISSN: 0094-243X
PB American Institute of Physics
DT Journal; General Review
LA English
AB A review. A simple and versatile process to achieve covalent functionalization at the endcaps and sidewalls of carbon **nanotubes** is presented. The reaction is based on the 1,3-dipolar cycloaddn. of **azomethine** ylides. Various functional groups can be attached and the modified **nanotubes** have shown interesting applications in biol. or materials science.
RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
TI Applications of soluble carbon nanotubes

AN 2003:928257 CAPLUS
DN 140:271183
TI Applications of soluble carbon nanotubes
AU Tasis, Dimitrios; Tagmatarchis, Nikos; Georgakilas, Vasilios; Prato, Maurizio; Pantarotto, Davide; Bianco, Alberto; Guldi, Dirk M.
CS Dipartimento di Scienze Farmaceutiche, Universita di Trieste, Trieste, 34127, Italy
SO Proceedings - Electrochemical Society (2003), 2003-15(Fullerenes--Volume 13: Fullerenes and Nanotubes), 264-268
CODEN: PESODO; ISSN: 0161-6374
PB Electrochemical Society
DT Journal
LA English
AB A symposium report. Carbon **nanotubes** can be functionalized via 1,3-dipolar cycloaddn. of **azomethine** ylides. Following this protocol, biol. active peptides can be easily attached through a covalent bond to carbon **nanotubes**. Chemical treatment of carbon **nanotubes** affects their photophys. properties.
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
TI Supramolecular organized structures of fullerene-based materials and organic functionalization of carbon nanotubes
AN 2003:689690 CAPLUS
DN 140:16398
TI Supramolecular organized structures of fullerene-based materials and organic functionalization of carbon nanotubes
AU Tasis, Dimitrios; Tagmatarchis, Nikos; Georgakilas, Vasilios; Gamboz, Claudio; Soranzo, Maria-Rosa; Prato, Maurizio
CS Settore Microscopia Elettronica, Dipartimento di Scienze Farmaceutiche and CSPA, Universita di Trieste, Trieste, 34127, Italy
SO Comptes Rendus Chimie (2003), 6(5-6), 597-602
CODEN: CRCOCR; ISSN: 1631-0748
PB Editions Scientifiques et Medicales Elsevier
DT Journal; General Review
LA English
AB A review. Self-assembly and morphol. organization of various fulleropyrrolidine derivs. affords different and individual supramol. architectures. Nanospheres, tubules and bundles of nanorods are formed depending on the nature of the added group in the fullerene unit. The current work represents, in the nanometer scale, a novel connection between spherical-shaped fullerene-based materials and fibrous-structurally **nanotubes**. We also report on the organic functionalization of carbon **nanotubes** via 1,3-dipolar cycloaddn. of **azomethine** ylides, which results in solubilization of the functionalized **nanotubes** in most common organic solvents. To cite this article: D. Tasis et al., C. R. Chimie 6 (2003).
RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
TI Fullerene-based morphologically organized superstructures and soluble functionalized carbon nanotubes materials
AN 2003:683490 CAPLUS
DN 140:31896
TI Fullerene-based morphologically organized superstructures and soluble functionalized carbon nanotubes materials
AU Georgakilas, Vasilios; Tagmatarchis, Nikos; Voulgaris, Dimitrios; Tassis, Dimitrios; Prato, Maurizio; Guldi, Dirk M.; Melle-Franco, Manuel; Zerbetto, Francesco
CS Dipartimento di Scienze Farmaceutiche, Universita di Trieste, Piazzale Europa 1, Trieste, 34127, Italy
SO Proceedings - Electrochemical Society (2002), 2002-12(Fullerenes--Volume 12: The Exciting World of Nanocages and Nanotubes), 82-87

CODEN: PESODO; ISSN: 0161-6374
PB Electrochemical Society
DT Journal
LA English
AB Self-assembly and morphol. organization of various fulleropyrrolidine derivs. affords different and individual supramol. architectures. Nanospheres, tubules and bundles of nanorods are formed depending on the nature of the added group in the fullerene unit. The current work represents, in the nanometer scale, a novel connection between spherical-shaped fullerene-based materials and fibrous-structurally **nanotubes.** We also report on the organic functionalization of carbon **nanotubes** via 1,3 dipolar cycloaddn. of **azomethine** ylides which results in solubilization of the functionalized **nanotubes** in most common organic solvents.
RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
TI A Theoretical Exploration of the 1,3-Dipolar Cycloadditions onto the Sidewalls of (n,n) Armchair Single-Wall Carbon Nanotubes
AN 2003:585628 CAPLUS
DN 139:245516
TI A Theoretical Exploration of the 1,3-Dipolar Cycloadditions onto the Sidewalls of (n,n) Armchair Single-Wall Carbon Nanotubes
AU Lu, Xin; Tian, Feng; Xu, Xin; Wang, Nanqin; Zhang, Qianer
CS State Key Laboratory for Physical Chemistry of Solid Surfaces, Center for Theoretical Chemistry, Institute of Physical Chemistry, Department of Chemistry, Xiamen University, Xiamen, 361005, Peop. Rep. China
SO Journal of the American Chemical Society (2003), 125(34), 10459-10464
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
AB The viability of 1,3-dipolar cycloaddns. of a series of 1,3-dipolar mols. (**azomethine** ylide, ozone, nitrone, nitrile imine, nitrile ylide, nitrile oxide, diazomethane, and Me azide) onto the sidewalls of carbon **nanotubes** has been assessed theor. by means of a two-layered ONIOM approach. The theor. calcns. predict the following: (i) other than the 18-valence-electron **azomethine** ylide and ozone, the 16-valence-electron nitrile ylide and nitrile imine are the best candidates for experimentalists to try; (ii) upon 1,3-dipolar cycloaddn., a 1,3-dipole mol. is di-σ-bonded to a pair of carbon atoms on the sidewall of SWNT, forming a five-membered ring surface species; (iii) the as-formed 1,3-dipole-SWNT bonding is much weaker than that in the products of the mol. 1,3-DC reactions and can be plausibly broken by heating at elevated temps.; (iv) the sidewalls of the armchair (n,n) SWNTs (n = 5-10) are subject to the 1,3-DCs of ozone and **azomethine** ylides; (v) both the 1,3-DC reactivity and retro-1,3-DC reactivity are moderately dependent on the diams. of SWNTs, implying the feasibility of making use of the heterogeneous 1,3-DC chemical to purify and sep. SWNTs diameter-specifically.
RE.CNT 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
TI Organic functionalized carbon nanotubes
AN 2002:910734 CAPLUS
DN 138:258986
TI Organic functionalized carbon nanotubes
AU Georgakilas, Vasilios; Tagmatarchis, Nikos; Voulgaris, Dimitrios; Prato, Maurizio; Kukovecz, Akos; Kuzmany, Hans; Hirsch, Andreas; Zerbetto, Francesco; Melle-Franco, Manuel
CS Dipartimento di Scienze Farmaceutiche, Universita di Trieste, Trieste, 34127, Italy
SO AIP Conference Proceedings (2002), 633(Structural and Electronic

Properties of Molecular Nanostructures), 73-76
CODEN: APCPCS; ISSN: 0094-243X
PB American Institute of Physics
DT Journal
LA English
AB A well documented methodol. based on the 1,3 dipolar cycloaddn. of **azomethine** ylides for solubilizing carbon **nanotubes** is reported. The products, organic functionalized carbon **nanotubes**, were characterized by anal. techniques as well as TEM.
RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
TI Purification of HiPCO carbon nanotubes via organic functionalization
AN 2002:851272 CAPLUS
DN 137:328366
TI Purification of HiPCO carbon nanotubes via organic functionalization
AU Georgakilas, Vasilios; Voulgaris, Dimitrios; Vazquez, Ester; Prato, Maurizio; Guldi, Dirk M.; Kukovecz, Akos; Kuzmany, Hans
CS Dipartimento di Scienze Farmaceutiche, Universita di Trieste, Trieste, 34127, Italy
SO Journal of the American Chemical Society (2002), 124(48), 14318-14319
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
AB A new method for the purification of HiPCO single-wall carbon nanotubes (SWNT) is reported, which consists of the following sequence: (i) organic functionalization of the as-produced nanotubes (pristine tubes, p-SWNT), (ii) purification of the soluble functionalized nanotubes (f-SWNT), (iii) removal of the functional groups and recovery of purified nanotubes (r-SWNT) by thermal treatment at 350°, followed by annealing to 900°. Each of these steps contributes to the purification, but only their sequential combination leads to high-purity materials. Organic functionalization makes the SWNT more easy to handle, which results in a better manipulation for potential practical uses. The electronic properties of the purified tubes were investigated via Raman and NIR spectroscopies along with TEM.
RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
TI Organic Functionalization of Carbon Nanotubes
AN 2002:14868 CAPLUS
DN 136:216613
TI Organic Functionalization of Carbon Nanotubes
AU Georgakilas, Vasilios; Kordatos, Konstantinos; Prato, Maurizio; Guldi, Dirk M.; Holzinger, Michael; Hirsch, Andreas
CS Dipartimento di Scienze Farmaceutiche, Universita di Trieste, Trieste, 34127, Italy
SO Journal of the American Chemical Society (2002), 124(5), 760-761
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
OS CASREACT 136:216613
AB A very general and versatile method for functionalizing different types of carbon **nanotubes** is described, using the 1,3-dipolar cycloaddn. of **azomethine** ylides. Approx. one organic group per 100 carbon atoms of the **nanotube** is introduced, to yield remarkably soluble bundles of **nanotubes**, as seen in transmission electron micrographs. The solubilization of the **nanotubes** generates a novel, interesting class of materials, which combines the properties of the **nanotubes** and the organic moiety, thus offering new opportunities for applications in materials science, including the preparation

of nanocomposites.
RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN
TI Quantum chemistry study of chemical functionalization reactions of fullerenes and carbon nanotubes
AN 1999:654264 CAPLUS
DN 131:350923
TI Quantum chemistry study of chemical functionalization reactions of fullerenes and carbon nanotubes
AU Jaffe, Richard L.
CS NASA Ames Research Center, Moffett Field, CA, 94035, USA
SO Proceedings - Electrochemical Society (1999), 99-12(Recent Advances in the Chemistry and Physics of Fullerenes and Related Materials), 153-162
CODEN: PESODO; ISSN: 0161-6374
PB Electrochemical Society
DT Journal
LA English
AB Conference proceedings. Cycloaddn. reactions of fullerenes and single wall carbon **nanotubes** have been studied by ab initio quantum chemical calcns. using non-local hybrid d. functional theory. Known reactions of C60 with benzyne, dichlorocarbene (CCl2) and **azomethine** ylide are used to validate the computational model. For C60, the adduct binding energies are all large. However, results for **nanotube** sidewalls and endcaps show the adducts to be considerably less stable. While benzyne cycloaddn. reaction with **nanotubes** is feasible, the CCl2 reaction is not likely to occur. The adduct binding energies exhibit no correlation with substrate distortion energies, indicating that strain energy is not an important factor for the determination of reactivity.
RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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